

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) An electrical device comprising
  - (A) an element which
    - (1) has first and second surfaces and
    - (2) comprises a conductive polymer composition, and
  - (B) a first metal foil electrode which
    - (1) comprises
      - (a) a first surface having (i) a center line average roughness  $R_a$   $\mu\text{m}$  as measured by using an interferometer, and (ii) a reflection density RD, the product  $R_a$  times RD being 0.5 to 1.6  $\mu\text{m}$ , and
      - (b) a second surface, and
    - (2) is positioned so that the first surface of the electrode is in contact with the conductive polymer element.
2. (original) A device according to claim 1 wherein  $R_a$  is 0.5 to 2.7  $\mu\text{m}$  and RD is at least 0.5.
3. (original) A device according to claim 1 wherein the conductive polymer composition comprises a polymeric component and dispersed therein a particulate conductive filler.
4. (original) A device according to claim 3 wherein the polymeric component of the composition comprises a polyolefin or a fluoropolymer.
5. (original) A device according to claim 1 wherein the conductive polymer composition exhibits PTC behavior.

6. (original) A device according to claim 1 wherein the first metal foil electrode comprises nickel or copper.
7. (original) A device according to claim 1, wherein the first surface of the first metal foil electrode comprises nickel.
8. (original) A device according to claim 1, further comprising a second metal foil electrode positioned so that the conductive polymer element is sandwiched between the first metal foil electrode and the second metal foil electrode.
9. (original) A device according to claim 1 wherein the device is a circuit protection device which has a resistance of at most 100 ohms.
10. (currently amended) An electrical device comprising
  - (A) an element comprising a conductive polymer composition, and
  - (B) a first metal foil electrode which
    - (1) is produced by
      - (a) providing a base metal foil having a first surface having a center line average roughness  $R_a$  as measured by using an interferometer of at most 0.45  $\mu\text{m}$ , and
      - (b) depositing material to provide protrusions onto the first surface of the base metal foil,
    - (2) comprises
      - (a) a first surface having (i) a center line average roughness  $R_a$   $\mu\text{m}$ , and (ii) a reflection density RD, the product  $R_a$  times RD being at least 0.14  $\mu\text{m}$ , and
      - (b) a second surface, and
    - (3) is positioned so that the first surface of the electrode is in contact with the conductive polymer element.

11. (canceled)
12. (canceled)
13. (canceled)
14. (withdrawn) A process for making an electrical device, said process comprising
  - (A) providing an element comprising a conductive polymer composition,
  - (B) providing a first metal electrode having
    - (1) a first surface having a center line average roughness and a reflection density RD such that the product  $R_a$  times RD is at least  $0.14\text{ }\mu\text{m}$ , and
    - (2) a second surface,
  - (C) positioning at least one crosslinking agent between the conductive polymer and the first surface of the first metal electrode, and
  - (D) securing the first surface of the metal electrode to the conductive polymer element with the crosslinking agent therebetween.
15. (withdrawn) A process according to claim 14 wherein the crosslinking agent is activated concurrently with the securing process.
16. (withdrawn) A process according to claim 14 wherein the crosslinking agent is activated by thermal or radiation means.
17. (currently amended) An electrical device comprising
  - (A) an element comprising a conductive polymer composition and
  - (B) in contact with the element, a metal electrode comprising
    - (1) a base metal foil comprising a first metal and

- (2) first and second surfaces, said first surface comprising
  - (a) protrusions having a maximum height of 1  $\mu\text{m}$ , ~~and~~
  - (b) a reflection density RD of at least 0.6, and
  - (c) the first metal.

18. (original) A device according to claim 17 wherein the metal electrode is produced by a process comprising

- (A) providing a base metal foil having first and second surfaces, and
- (B) pulse plating metal deposits onto at least the first surface of the foil using a pulse frequency of 10 to 1000 Hz.

19. (currently amended) A device as in claim 17, wherein the ~~base~~ first metal foil comprises copper or nickel ~~and the metal deposits comprise copper or nickel.~~

20. (currently amended) An electrical device comprising

- (A) an element comprising a conductive polymer composition and
- (B) a metal electrode, the metal electrode comprising
  - (1) a base metal foil,
  - (2) a first surface which
    - (a) comprises densely spaced, fine, dendritic metal structures, and
    - (b) has a RD of 1.5 to 1.7, and
    - (c) ~~(b)~~ is in contact with the element, and
  - (3) a second surface.

21. (original) A device according to claim 20 wherein the metal electrode is produced by a process consisting essentially of

- (A) providing a base metal foil having a first surface and a second surface, and
- (B) depositing dendritic metal structures onto at least the first surface of the base metal foil by electrodepositing metal under diffusion limited conditions.

22. (original) A device according to claim 20, wherein the base metal foil comprises copper or nickel and the metal dendrites comprise copper or nickel.

23. (original) An electrical circuit which comprises

- (1) a source of electrical power;
- (2) a load; and
- (3) a circuit protection device according to claim 1 electrically connecting the source and the load.